



Geometry Reference Sheet

Formulas

Parallelogram $Area = bh$	Prism $Volume = Bh$ $Surface Area = 2B + Ph$												
Triangle $Area = \frac{1}{2}bh$	Right Cylinder $Volume = \pi r^2 h$ $Surface Area = 2\pi r^2 + 2\pi rh$												
Trapezoid $Area = \frac{1}{2}h(b_1 + b_2)$	Sphere $Volume = \frac{4}{3}\pi r^3$ $Surface Area = 4\pi r^2$												
Circle $Area = \pi r^2$ $Circumference = \pi d$ or $Circumference = 2\pi r$	Right Cone $Volume = \frac{1}{3}\pi r^2 h$ $Surface Area = \pi r\ell + \pi r^2$												
General Equations $Ax + By = C$ $y = mx + b$ $y - y_1 = m(x - x_1)$ $(x - h)^2 + (y - k)^2 = r^2$	Square Pyramid $Volume = \frac{1}{3}Bh$ $Surface Area = \frac{1}{2}P\ell + B$												
	Pythagorean Theorem $a^2 + b^2 = c^2$												
Slope Formula $m = \frac{y_2 - y_1}{x_2 - x_1}$	Right Triangle Relationships <table><tr><td>30°</td><td>60°</td><td>90°</td></tr><tr><td>x</td><td>$x\sqrt{3}$</td><td>$2x$</td></tr><tr><td>45°</td><td>45°</td><td>90°</td></tr><tr><td>x</td><td>x</td><td>$x\sqrt{2}$</td></tr></table>	30°	60°	90°	x	$x\sqrt{3}$	$2x$	45°	45°	90°	x	x	$x\sqrt{2}$
30°		60°	90°										
x	$x\sqrt{3}$	$2x$											
45°	45°	90°											
x	x	$x\sqrt{2}$											
Distance Formula $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$													
Midpoint Formula For a line segment with endpoints (x_1, y_1) and (x_2, y_2) the midpoint is $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$	Trigonometric Ratios $\sin A = \frac{\textit{opposite}}{\textit{hypotenuse}}$ $\cos A = \frac{\textit{adjacent}}{\textit{hypotenuse}}$ $\tan A = \frac{\textit{opposite}}{\textit{adjacent}}$												